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936,734	8/25/78	David J. Nutting et al	

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EXAMINER	
Hum, V.	
ART UNIT	PAPER NUMBER
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Director's Office  
Group 300

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS ACTION IS SET  
TO EXPIRE 1 MONTHS FROM THE DATE OF THIS LETTER.

This communication is responsive to Reissue applicants' submissions, Paper Nos. 118, 121, filed in response to the final rejection of Paper Nos. 114 and 117. Paper Nos. 121, 126, 128, 142 and 144 have also been filed by Reissue applicants in compliance with the Examiner's Request for Additional Information, Paper No. 122 and in reply to Protestors' varied submissions, Paper Nos. 116, 119, 120, 133, 141 and 143.

Upon careful evaluation of the extensive exhibits, depositions, evidence, etc., newly presented by both parties, the examiner has found the following with respect to the Section 102(a) and Section 102(a)/103 issues:

1. that an "open house" for employees and affiliates of Cyan/Atari did occur at the Cyan premises in the Litton Building in May/June, 1974;

ATTACHMENT

Art Unit 334

2. that the Eigen personnel and the Litton brothers (if the latter were in attendance) had a confidential relationship with Cyan (See Paper Nos. 118 and 126);
3. that family members and casual visitors present at the "open house" or visiting Cyan facilities were there to tour the facilities or visit Cyan personnel and not for the express purpose of viewing the El Toro pinball machine. Bergstrom v. Sears Roebuck and Co., 457 F. Supp. 213, 199 U.S.P.Q. 269 (D.C. Minn. 1978), affirmed, 599 F.2d 62, 203 U.S.P.Q. 121 (8th Cir. 1979);
4. that there is no evidence to clearly and convincingly show that the El Toro pinball machine was accessible to a member of the public in an unrestricted way or that anyone actually viewed the subject device other than Litton, Eigen, Cyan or Atari personnel or casual visitors to Cyan; and
5. that even if casual visitors did observe the El Toro, it is questionable whether they would have been able to glean the technological complexities from visual impressions to be able to convey to the public the subject device. Bergstrom v. Sears, supra. Cf. Watson v. Allen, 254 F.2d 342, 117 U.S.P.Q. 68 (D.C. Cir. 1958), affirming, 114 U.S.P.Q. 214 (D.D.C. 1957). But cf. In re Blaisdell, 242 F.2d 779, 113 U.S.P.Q. 289 (CCPA 1957). (Both Blaisdell and Allen lost control of their respective inventions to public while the instant situation does not).

Thus, the rejections under 35 U.S.C. 102(a) and 102(a)/103 have been withdrawn.

Art Unit 334

In regard to the 35 U.S.C. 102(g) and 102(g)/103 issues, the examiner has reconsidered all of the issues in light of the evidence of record. The major question is whether the El Toro pin-ball machine was actually a reduction to practice. While it is recognized that reduction to practice under 35 U.S.C. 102(g) needn't be of commercial quality<sup>1</sup>, it should have been tested under actual working conditions to the extent of ascertaining practical utility of its intended purpose beyond probability of failure. Field v. Knowles, 86 U.S.P.Q. 373, 379 (CCPA 1950); Steinberg v. Seitz, 186 U.S.P.Q. 209, 212 (CCPA 1975). However, in the event of failure, if by virtue of the simplicity of the invention such could obviously be corrected then a reduction to practice could still be sustained. Piher at 916, 918.

In the El Toro stage evidence exists to show that it was susceptible to switches "hanging up". And despite further work this failure was apparently not corrected as noted by the evidentiary record. Although such might have been construed to fall within the context of Piher, of the two Delta Queen showings, the one shown at the MOA conference was apparently successful while the Frank's Pizza Parlor device was not. Clearly, it can be seen that this represents a 50% probability of failure. Even though Atari/Cyan should have learned from the El Toro experimental stage and applied such learning to the two Delta Queens to eliminate the "bombing" such was not apparently done. It is apparent that they still did not have control of the device. Coupled with the newly supplied arguments, submissions and the fact that the programmer (Cox) did not correct the program to

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<sup>1</sup>Piher, S.A. v. CTS Corp., 212 U.S.P.Q. 914, 918 (7th Cir. 1981).

eliminate the inherent problems and Cyan, despite testimony that various noise reduction techniques were conventional in the art, was not able to cure the defects in the Delta Queen at Frank's, the examiner now finds that the El Toro was not reduced to practice for the purposes of a 35 U.S.C. 102(g) and 102(g)/103 rejection.

Upon reconsideration of the obviousness issue raised by Protestors in Paper No. 119 as a reply to the final rejection, the examiner has carefully weighed arguments from both parties. The authority relied upon is Graham v. John Deere, 383 U.S. 1, 148 U.S.P.Q. 459 (1966)<sup>2</sup>.

The inclusion of the March 21, 1974 Electronics article would, on the face of it, seem to be suggestive of the hybrid combination proposed by Protestors to establish a prima facie case of obviousness. Up to the moment of Reissue applicants' conception there did not exist a computer based pinball device. The Burnside patent did, however, show a multiplexed electromechanical arrangement for cyclicly and sequentially scanning contacts (e.g. note column 4) made "hot" by ball actuated switches and lights for use in a surface projectile game prior to applicants' invention. And the MCS-4 disclosure also prior to applicants' invention did disclose switch scanning as argued by Protestors.

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<sup>2</sup>Under section 103, scope and content of prior art are to be determined, differences between prior art and claims are to be ascertained, and level of ordinary skill in the pertinent art resolved; against this background, obviousness of subject matter is determined; such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to circumstances surrounding origin of subject matter sought to be patented; as indicia of obviousness, these inquiries may have relevancy.

The third consideration to be resolved is the level of skill to be attributed to the art. Clearly Atari/Cyan has been recognized as a company with a widely known reputation in the electronic game discipline. Moreover, the courts are cognizant of Atari's credentials and mentions same in Magnavox Company v. Chicago Dynamic Industries, 201 U.S.P.Q. 25, 27 (D.C. NII 1979).

At first blush it would appear that the groundwork has been laid in accordance to the Graham decision to support a case for obviousness. However, upon careful evaluation of all of the evidence certain facts have been considered.

1. In the November 1973 EE/Systems Engineering Today article Ross Schier of Bally, one considered ordinarily skilled in the art, indicated skepticism. Reading further on page 38 of that article, such skepticism was apparently widespread in the industry.
2. Prior to December of 1973, computerized pinball devices of the nature of the instant invention were not present in the industry.
3. Applicants began work on the subject invention around the November-December 1973 time frame.
4. Atari/Cyan's electronic pinball program was documented around February 1974.
5. An advertisement appeared in the March 21, 1974 edition of Electronics suggesting use of a microprocessor in a pinball machine along with the advantages for such a conversion.
6. In the May-June 1974 time frame Atari/Cyan had an open house for company personnel, family and affiliates.

7. The El Toro externally cabled microcomputer apparatus was shown at the open house along with other devices presently being developed at the Cyan facilities.
8. The El Toro was susceptible to "hanging up" or "bombing".
9. Sometime after the May-June 1974 open house but before October-November 1974 the El Toro machine was dismantled and the experimentation on that machine terminated.
10. Sometime after the May-June 1974 open house but before October-November 1974 the Delta Queen experimental stage commenced.
11. Reissue applicants reduced to practice the subject invention September 26, 1974.
12. Reissue applicants demonstrated same to Bally on September 26, 1974.
13. After viewing the subject invention, Bally proceeded to develop their own version of a microcomputer based pin-ball machine culminating in the Bracha patent, Patent No. 4,198,051.
14. A Delta Queen, one of five identical devices was successfully shown at the October-November 1974 MOA showing.
15. Another one of the five identical machines was unsuccessfully placed at Frank's pizza parlor between December 1974 and January 1975 due to "bombing".
16. A Cyan status report dated February 7, 1975 (Federal Rules of Evidence, Rule 803) recognized problems in the Delta Queen experimental stage.



17. A revamped version of the Delta Queen was successfully shown at the April 1975 Asilomar conference.
18. In 1976 the subject invention was being commercialized by Midway, a subsidiary of Bally.
19. Sometime between late 1977 and early 1978 Bally acquired the subject invention and Reissue applicants' company.
20. A license agreement was negotiated October 5, 1978 between Stern Electronics and Bally (now owner of Patent No. 4,093,232, subject of the instant Reissue application); Paper No. 109, Exhibit DB.
21. Royalties to the order of \$700,000 were paid by Stern through September 1981 in accordance to the provisions of the negotiated license; Paper No. 109, Exhibit DA.
22. Between 1977 and 1978, there was industry wide acceptance of electronic/solid state pinball games as evidenced by an industry survey conducted by Playmeter Magazine, November 1978 edition. See attachment A appended to this decision.

From an evaluation of the substantial evidence of record, the record would seem to support a finding of unobviousness on the basis of what actually did occur in the art and secondary considerations set forth in the Graham case.

Prior to Reissue applicants' invention the possibility of a computerized/solid state pinball machine was proposed but no known device of this nature was being developed. Apparently the major pinball concerns were not interested and somewhat skeptical of this approach, EE/Systems Engineering Today. Even after Reissue applicant began their computerized pinball project, there is no indication that the industrial leaders started their own ventures in this area despite

the suggestion of the March 21, 1974 Electronics article. Only video technology experts Atari and Ramtek mounted programs in this direction.

Once the programs were started, the evidentiary record shows that problems were encountered. There is considerable debate at this juncture as to whether noise should be an issue and whether the lack of solution thereto was indicative of unobviousness in the overall developmental procedure. The examiner has concluded from the evidence that while some noise reduction techniques are conventional in the electronic art and while Atari and Ramtek as well as Reissue applicants received help from companies such as Intel, Rockwell, etc., Atari and Ramtek did not seem able to overcome these problems at least as of May-June 1974. And even upon further experimentation Atari was not able to overcome these deficiencies in the Delta Queen until at least 1975. See the discussion in the treatment of the 35 U.S.C. 102(g) and 102(g)/103 rejections. In further regard to this issue, the examiner's findings appearing on pages 6-10 of Paper No. 61, the third Office action, would appear to be apropos and are being incorporated by reference and are appended to this decision as an attachment.

So when one has compared what actually transpired in the art to the theoretical possibilities of incorporating a microcomputer (e.g. the MCS-4) in a conventional "pinball" machine (e.g. Burnside Patent No. 2,864,619) as suggested by the March 21, 1974 Electronics article and proposed by Protestors, the strength of the arguments in favor therefor diminishes.

In further consideration of the collateral facts relating to the

1. spurring of others (i.e. Bally), once having seen the operative model of the subject invention, into activity (i.e. the Bracha patent),



2. skepticism on the part of those skilled in the art (pages 17 and 18 of Paper No. 121, received May 5, 1982),
3. recognition of worth and acquisition of the subject invention by an industry leader (Bally),
4. licensing of the subject invention to a competitor and subsequent royalty payments therefor, and
5. general acceptance in the industry as reported in the Playmeter survey,

it is clear that the above would have qualified as the secondary considerations found in Graham. Accord, Magnavox Co. v. Chicago Dynamic Industries, supra.

In conclusion, the 35 U.S.C. 103 rejection founded on Burnside or Durant in view of Electronics and MCS-4 would not have been sustainable in light of the above discussion.

Summary

The various submissions supplied by Reissue applicants after the final rejection have been accorded entry.

The rejections under 35 U.S.C. 102(a) and 102(a)/103 have been withdrawn.

The rejections under 35 U.S.C. 102(g) and 102(g)/103 have been withdrawn.

The proposed rejection under 35 U.S.C. 103 has been refused.

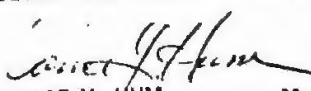
The claims of record have been found to avoid the prior art.

Applicants' offer to supply a new program listing, Paper No. 130, is accepted. See M.P.E.P. 608.05 and 37 C.F.R. 1.96.

Accordingly prosecution before the examiner on the merits of this application is closed. However, a determination of the issues relating to questions as to conduct by or on behalf of reissue applicant's remains outstanding.

This reissue application is being referred to the Office of the Assistant Commissioner for Patents for further consideration in regard to the question of conduct. Reissue applicants will be sent further communications in due course. M.P.E.P. 2022.03.

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GROUP ART UNIT 334

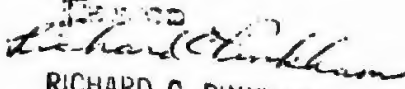
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EXAMINER

Attached hereto are the portions of pages 6 through 10 of the Examiner's Office Action, Paper No. 61, which the Examiner referred to on page 8 of his final decision, Paper No. 145.

Obviousness whether directed to the § 102(g)/103 issue, mentioned supra, or to the outstanding simultaneous invention issue is the same in both instances, and are, consequently, being treated together. The controlling case for § 103 is still the landmark decision Graham et al V. John Deare Co., et al, 383 U.S.1, 148 USPQ 459 (S. Ct. 1966) <sup>2</sup> The level of skill in the non-pinball, electronic game discipline would have apparently been very high. Mattel Inc. V. Hyatt et al, 206 USPQ 499 (DC C Calif. 1979). Magnavox Company V. Chicago Dynamic Industries et al, 201 USPQ 25 (DC Nill 1979).

Digitronic Corp. V. New York Racing Association, Inc., 53 F. 2d 740, 193 USPQ 577 (2d Cir. 1977). In fact, Atari and Ramtek could have been viewed as experts in this discipline. Accordingly, the ordinary artisian would not have been more successful in electronic game implementation than the acknowledged experts. Although there is evidence<sup>3</sup> that such experts were not familiar with the pinball area, they were apparently able to receive some education in this field. Thus, the only other facts which could have swayed the balance towards unobviousness would appear to have been in the secondary consideration treatment of Graham.

The value of an analysis based on secondary factors is clearly brought out in In re Worrest, 96 USPQ 381 (CCPA 1953). There the court defined a three part test for obviousness, as (1) recognition of the problem, (2) concept of the solution, and (3) implementation of the concept to solution. Admittedly, the problem was publicly recognized as evidenced by printed publication as well as the near simultaneous development of the solution to this problem by more than one party.<sup>4</sup>

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2. Refer to PP. 12-13 of the second Office action, Paper No. 46, a discussion of Graham with respect to the scope and content of the prior art and the differences between that art and the claims.

3. See footnote 22 in the second Office action, Paper No. 46. Moreover, the facts of record indicate that

of the parties involved (Patentee, Atari, Ramtek), one (Ramtek) never completed their project despite substantial evidence that their creation was actually derived from patentee; another (Atari) took three to four years to finalize their product; and yet,

4. Recently admitted papers, Paper Nos. 49, 56-60 reveal that one of the alleged parties may not have developed their device independently. Applicants have submitted evidence from one Dr. Tai that Ramtek's computerized pinball may have been derived from the Patentee through information acquired by Ray Holt. Protestors have attempted to discredit Dr. Tai's testimony and affidavits by testimony from Ray Holt (Federal Rule 607). Applicants, in turn, have introduced statements and evidence by others (Lemas, etc.) in an attempt to impeach Holt's testimony based on prejudice and interest, faulty recollection, reputation of veracity, etc. Based upon the evidentiary record, the examiner has concluded that:

- (1) Paragraph 10 of Dr. Tai's affidavit (Tai Exhibit 1) is founded upon a statement made by Patentee and is not evidence of actually viewing the claimed combination, Page 42 of the Tai Deposition;
- (2) Dr. Tai's paragraph 10 statement is admissible under the verbal acts admission to Federal Rule 802 since it has been construed as proof that a statement was made by Patentee to affiant;
- (3) Ray Holt's testimony is not sufficiently persuasive to impeach Dr. Tai's testimony when considered in light of other evidentiary materials (Paper No. 49, 58 and 59).
- (4) Sufficient evidence exists to eliminate only Ramtek as one of the parties under the doctrine of simultaneous and contemporaneous invention.



Patentee only required three to four months (from approximately June of 1974 to September of 1974) to complete their invention. When viewed in light of these facts, an inference exists that implementation of the solution might not have been as obvious as one would suppose.

A detailed evaluation of the facts would appear to strengthen any argument in favor of unobviousness. In view of the fact that two of the conceivers could have been termed electronic "experts", that microprocessor applications constituted an "exploding technology", and that the state-of-the art at the time of patentee's September of 1974 reduction to practice was vastly different from Atari's several reductions to practice, the examiner can only conclude that designing a unitary microprocessor based pinball machine may not have been so obvious. More specifically, the longer one experiments in the application of microprocessors, the greater the level of skill possessed and the higher the degree attributable to state-of-the art practices. Notably patentees accomplished the subject invention in a fairly rapid manner (several months) while Atari continued to experiment adding to its store of knowledge, as well as, to the level of the state-of-the art. Ramtek, on the other hand, never developed a product line encompassing a practical, commercial pinball machine. Moreover, taking into consideration, the fact that various competitors of patentees were apprised of patentees' unitary structure by September 26, 1974 or by at least the Chicago MOA Exhibition of 1975 (affidavit of J.E. Frederiksen, Exhibit T in Exhibit Book II of attachments to Paper No. 31), it is entirely plausible that those skilled in

the art could have been assured of the practicality of such an implementation. Such knowledge could, of itself, spur post-solution activity by those other than patentee to final reduction knowing that the subject invention was viable. And so, it would appear that the final reduction to practice by the expert in the dynamic electronic game art (Atari) would appear to have been less significant than in a static art.

The conditions relating to implementation of solution proposed in Worrest and characterized as a secondary consideration in Graham has not been met. The burden of establishing a case of obviousness for rejections based upon 35 USC 102(g)/103 and the doctrine of contemporaneous development has not been successful. And consequently, refusal of the claims on these grounds must fail.